

The ChIP-Chip Technology

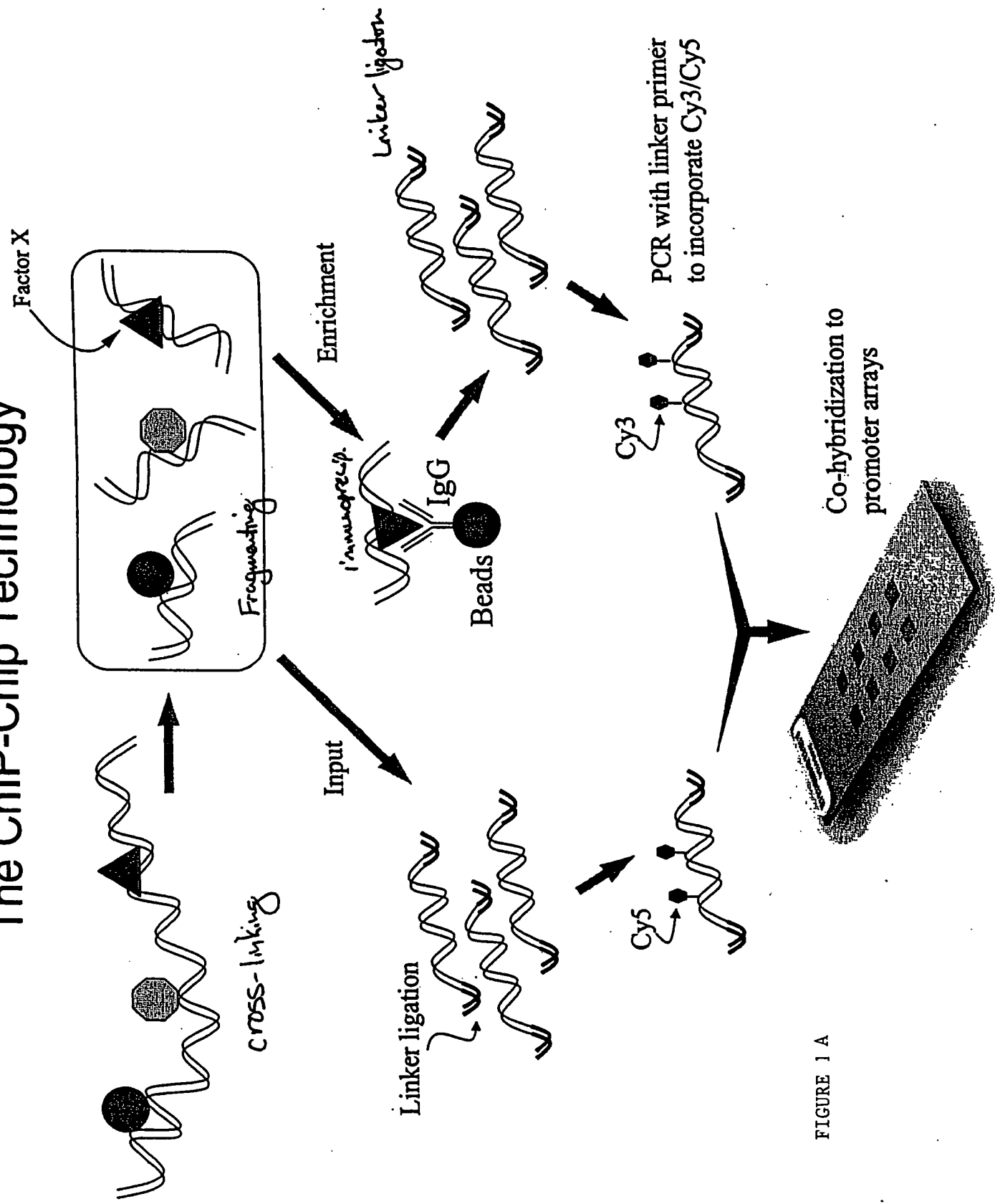
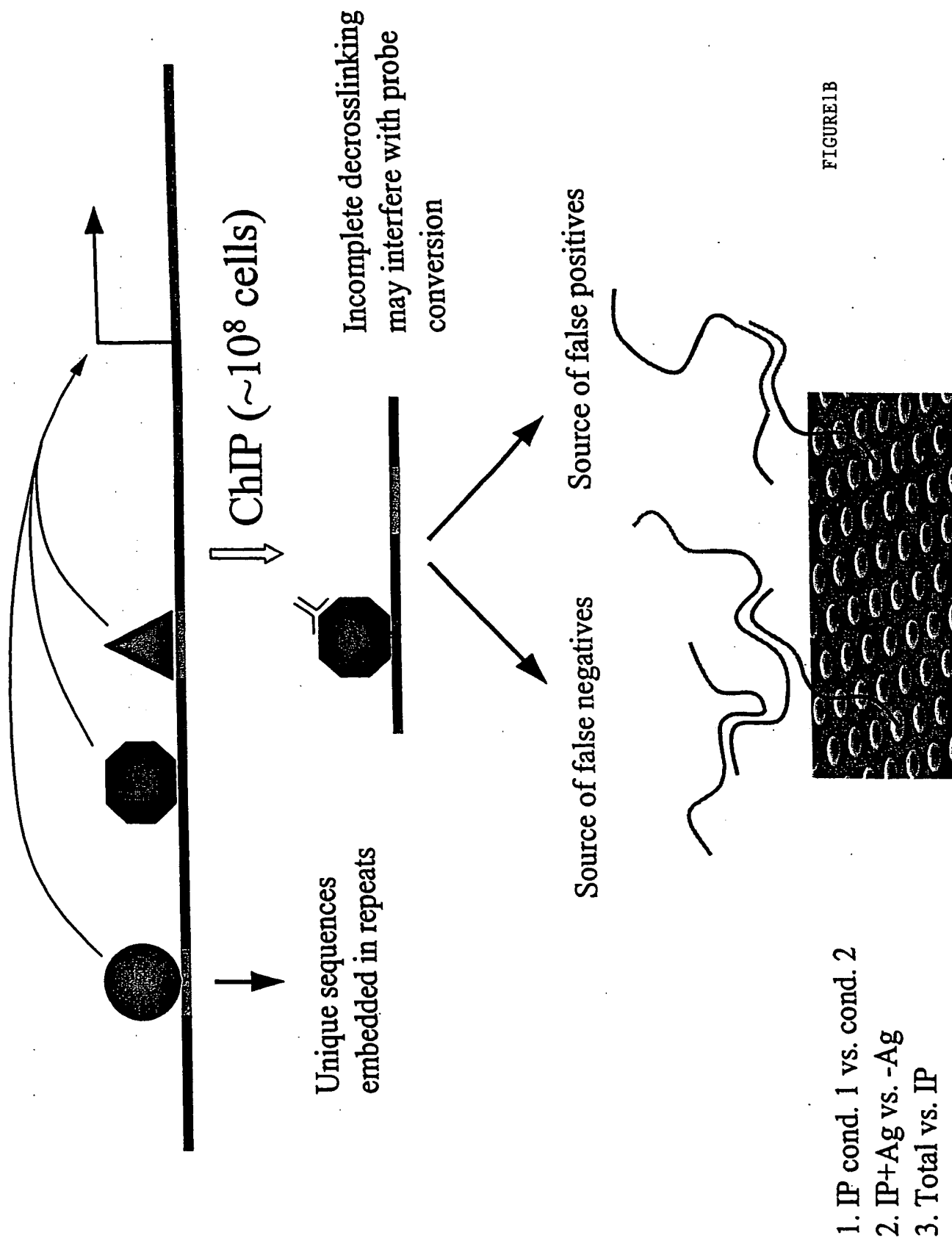


FIGURE 1 A

Challenges in Genome-Wide Location Analysis



The ChIP-DASL Technology

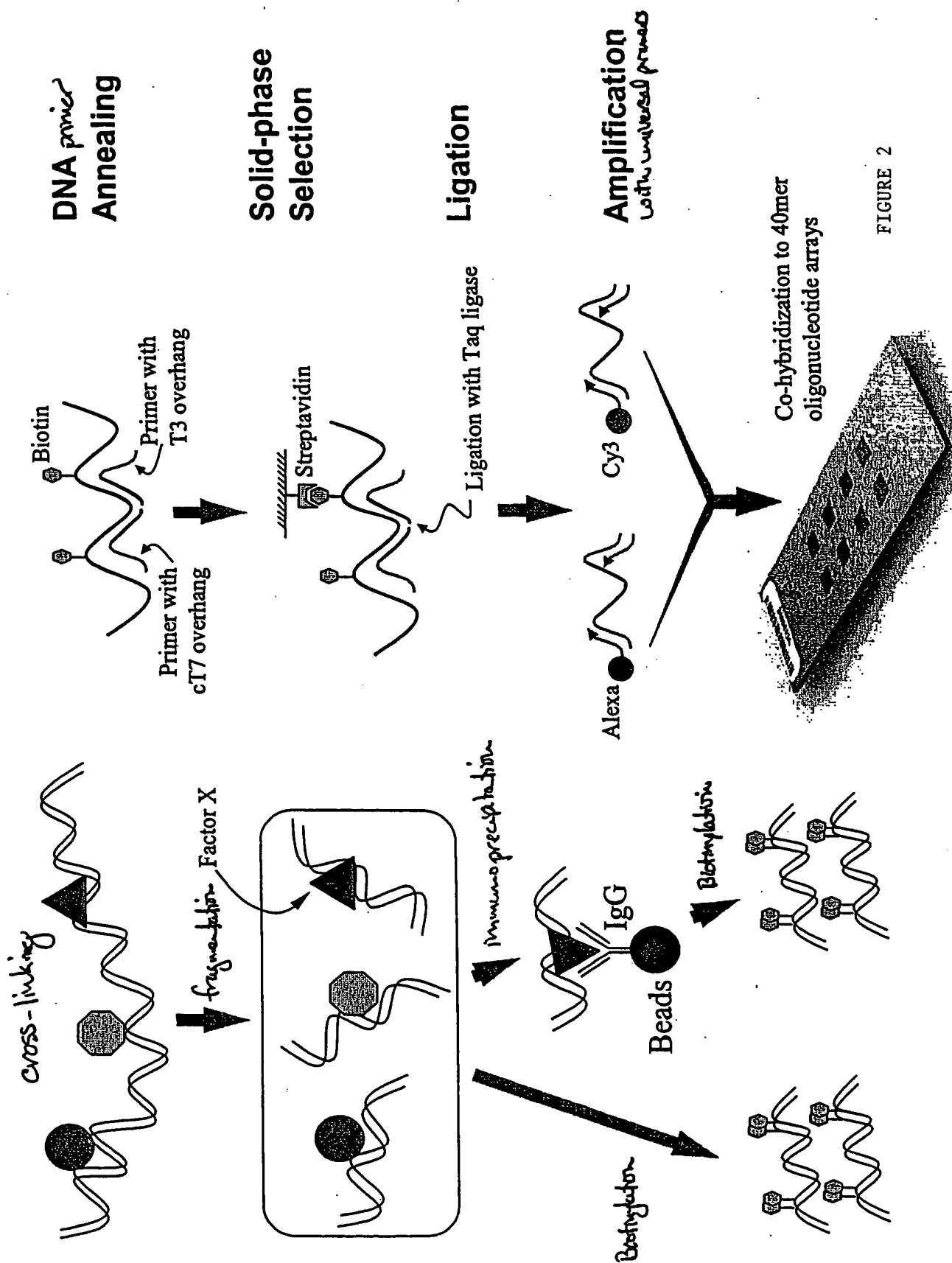


FIGURE 2

Specificity and Sensitivity of DASL

| Reaction # | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
|----------------------------|---|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|---|-----------------|-----------------|--|
| Genomic DNA | | 10 ⁵ | 10 ⁵ | 10 ⁵ | 10 ⁵ | 10 ⁵ | | | | 10 ⁵ | |
| Spiked Plasmid DNA | | | 10 ² | 10 ³ | 10 ⁴ | 10 ⁵ | 10 ⁵ | | 10 ⁵ | | |
| Oligo Pool for Genomic DNA | | | | | | | | + | + | + | |
| Oligo Pool for Spiked DNA | + | + | + | + | + | + | + | | | | |

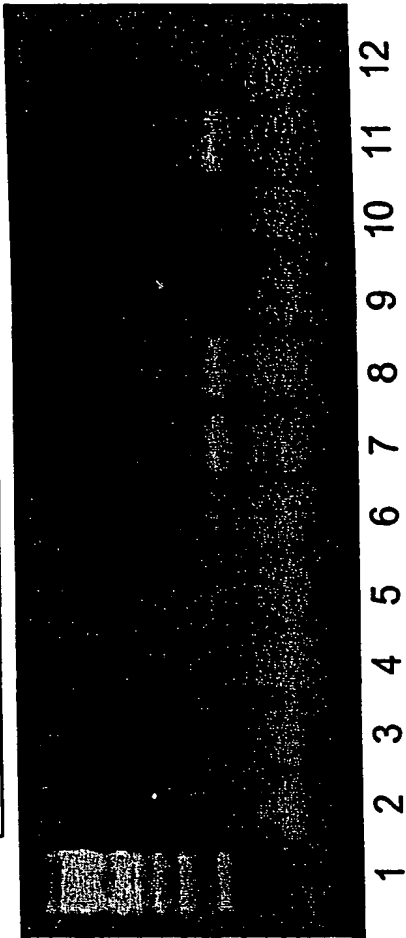
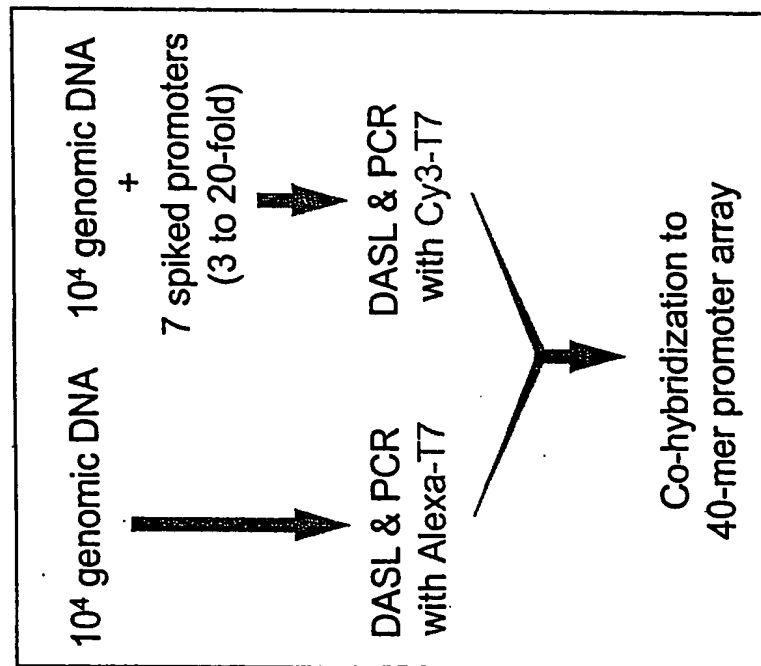


FIGURE 3A

Characterization of the ChIP-DASL Technology by using Spiking Controls

Spiking Strategy



Array Result

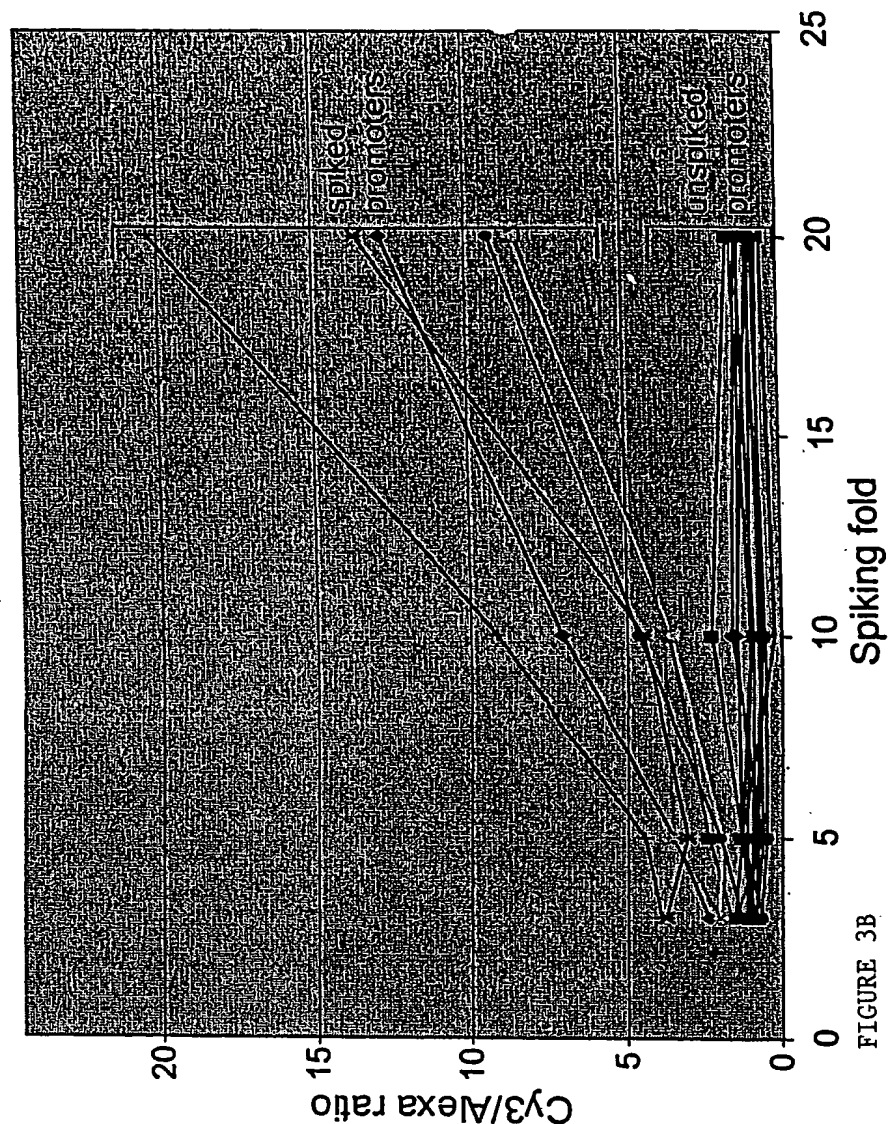


FIGURE 3B

5-fold Spiking on the 2K Human Promoter Array

Title: GENOME MAPPING OF FUNCTIONAL DNA
ELEMENTS AND CELLULAR PROTEINS
Inventor: Xiang-Dong FU, et al.
Filed: December 21, 2005
Express Mailing Label No. EV 793 689 187 US
Attorney Docket No. 034123-195
Sheet 7 of 11

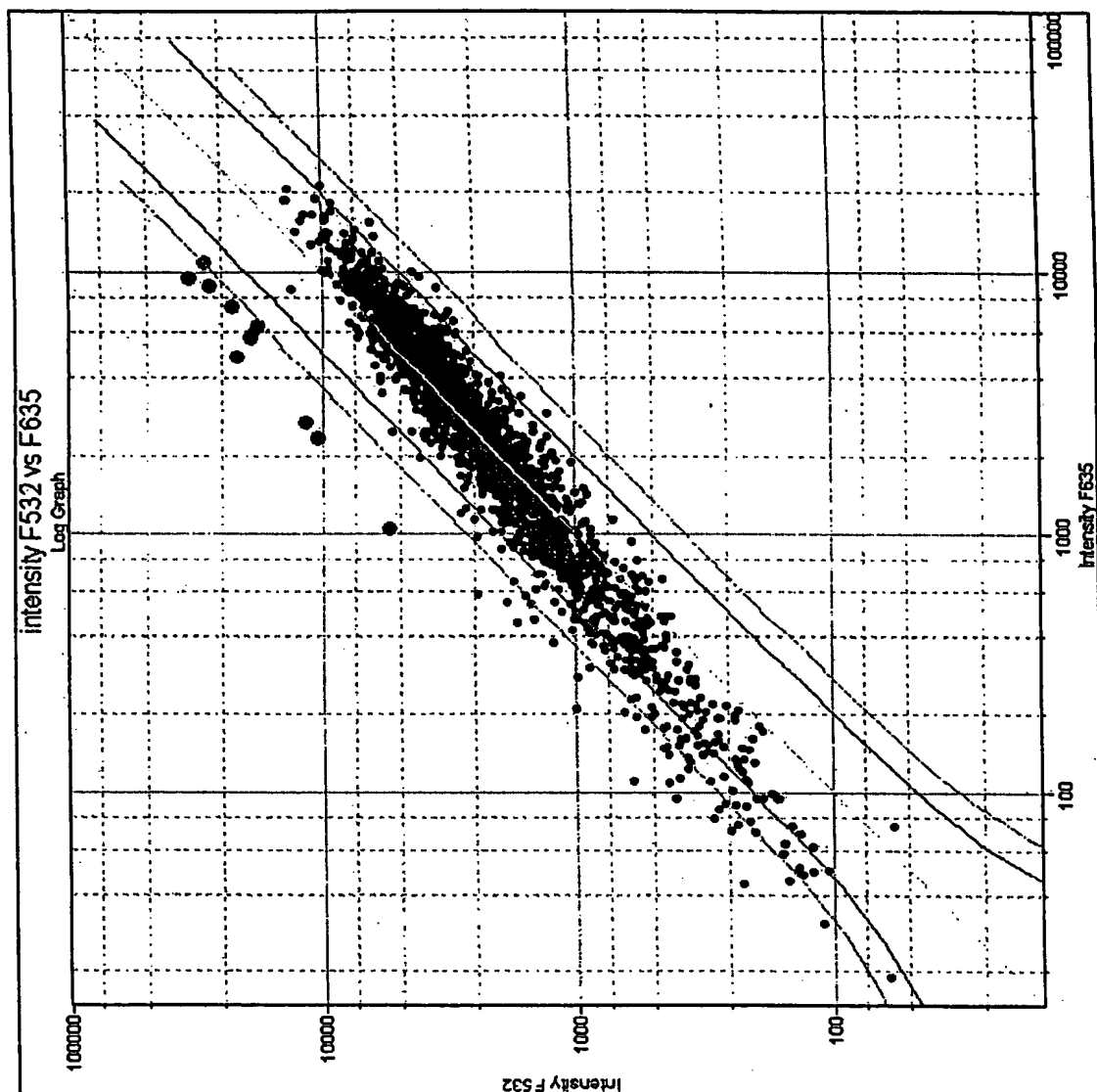
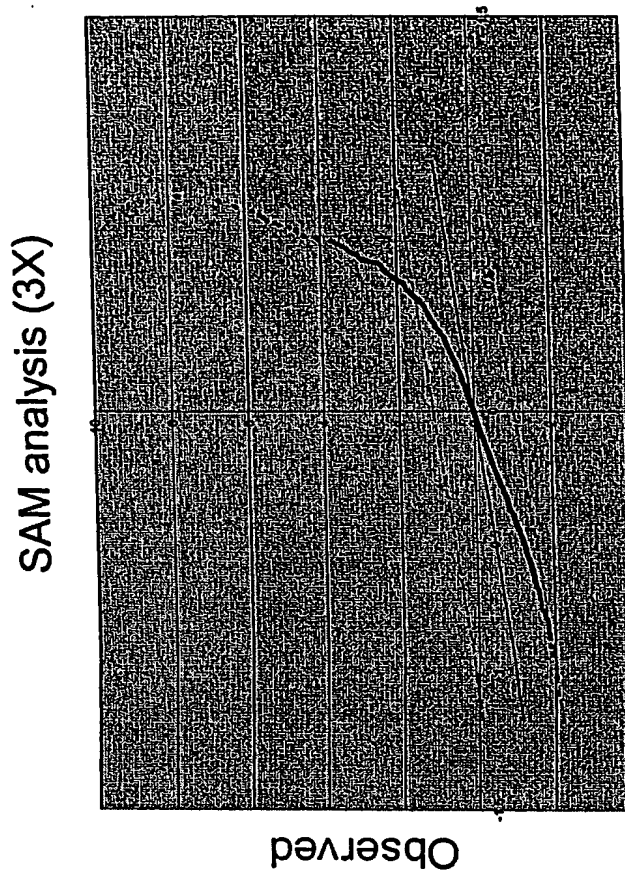
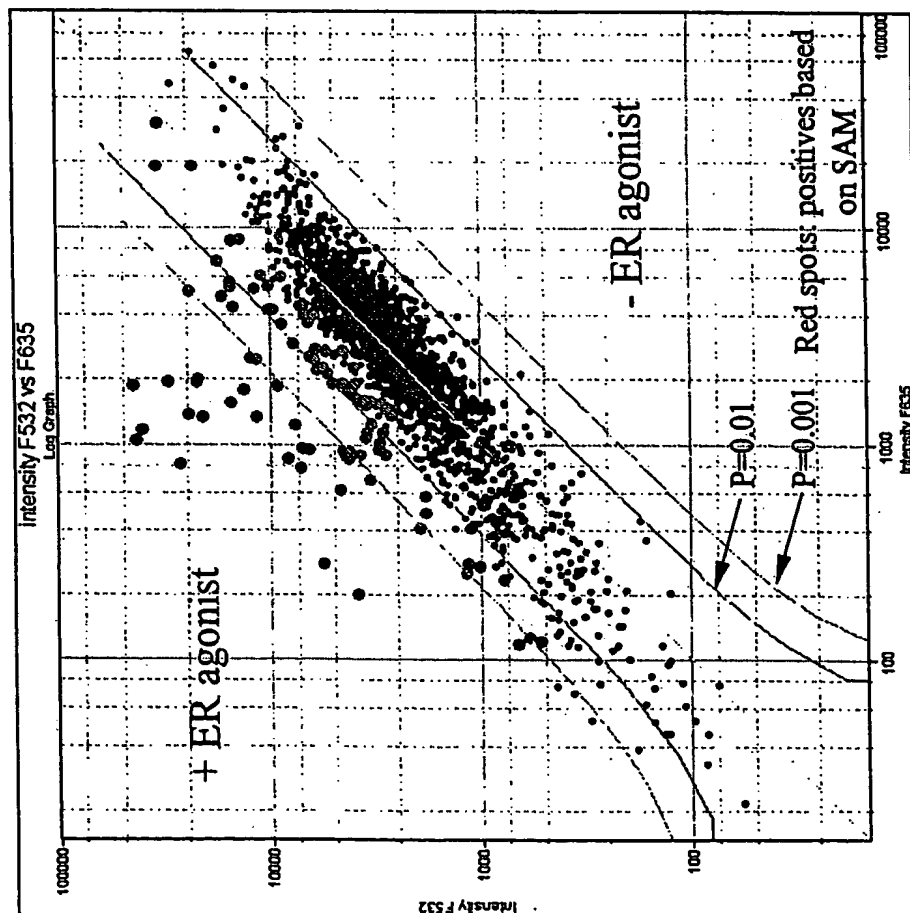


FIGURE 5

Identification of Estrogen Receptor Target Genes by DASL

Single array error model



Expected

Significant: 94

Median # false significant: 0.39842

Delta: 1.05853

FIGURE 6

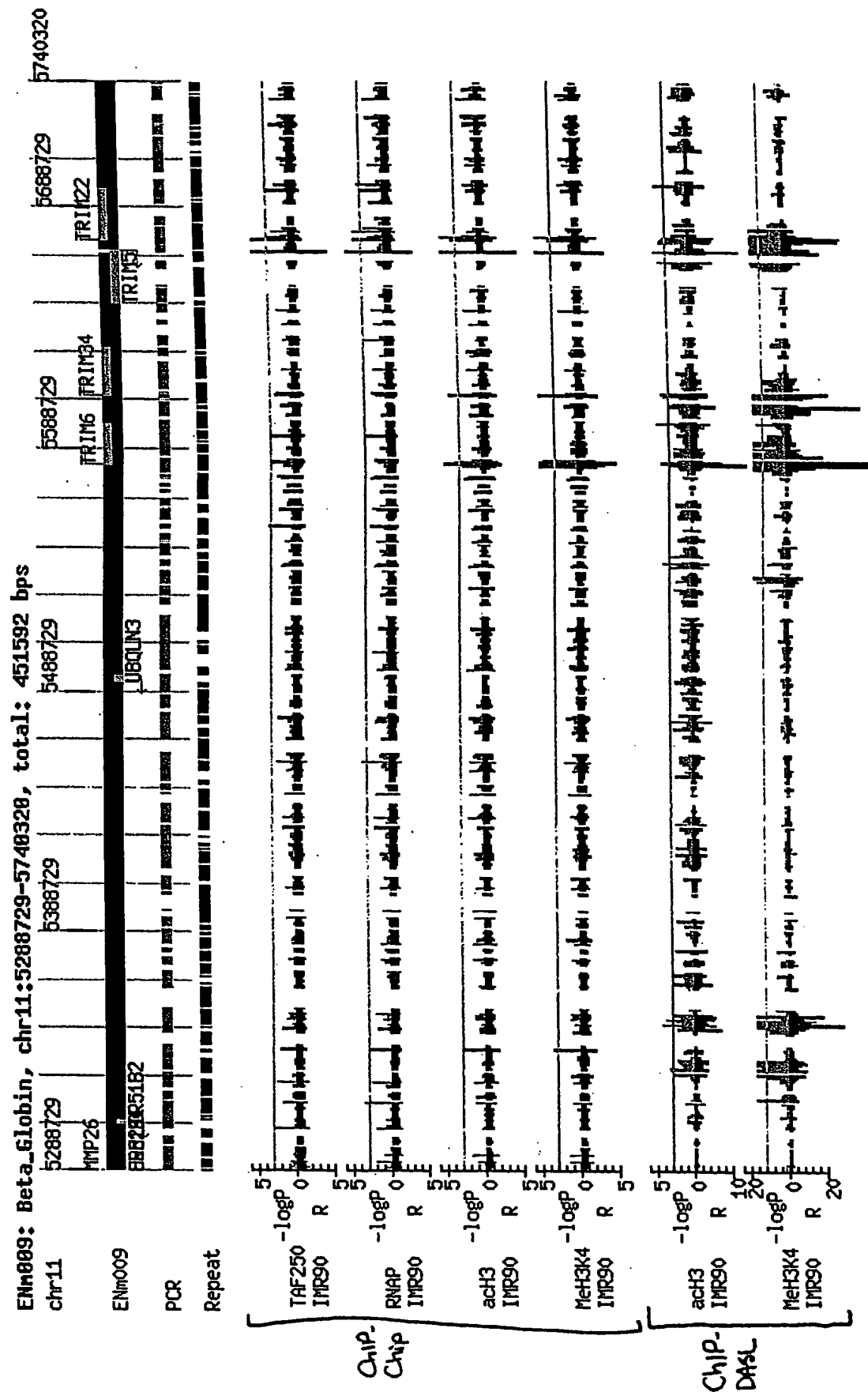
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Mapping Transcription Units by Tiling on the β -globin Locus

Project goal: Mapping functional DNA elements in the ENCODE region

Collaborator: Bing Ren (UCSD)



Additional Applications of DASL

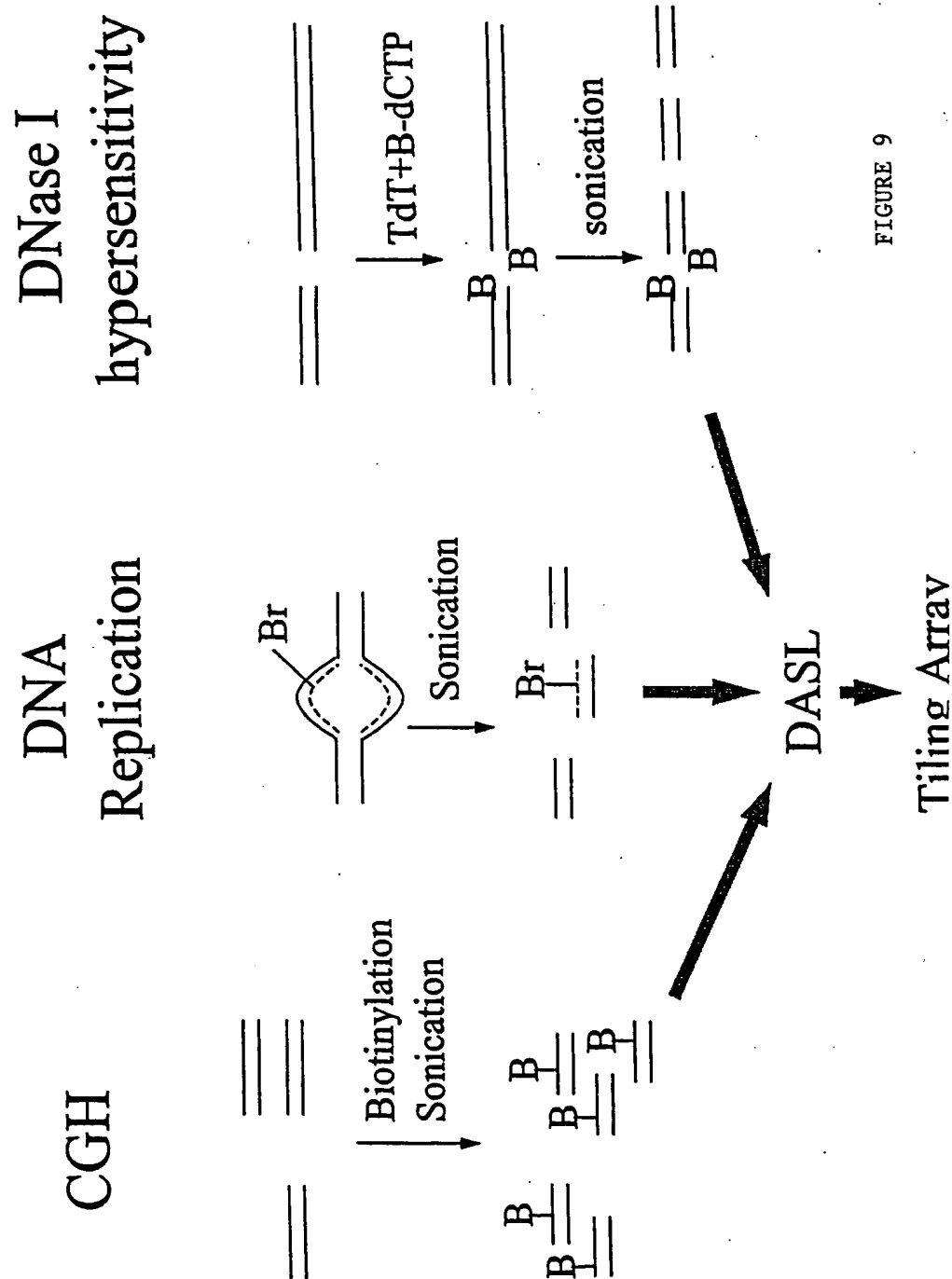


FIGURE 9